Metropolitan Borough of Knowsley

HIGHWAY ASSET MANAGEMENT POLICY
and
HIGHWAY ASSET MANAGEMENT STRATEGY

January 2015

Public Transport | Goods | Walking | Cycling | Traffic | Public Transport | Goods

Document Control Sheet

Document Details

Project Title	Knowsley HAMP
Document Title	Knowsley Council Highway Asset Management Policy and Asset Management Strategy
Revision	4
Status	Draft
Control Date	11 March 2014
Reference	

Record of Issue

Issue	Status	Author	Date	Check	Date	Authorised	Date
1	0th Draft	Trevor Collett	30/08/13	Not checked			
	Issued to Andrew Millar, Scott Bloxsom, Sam Beamish						
2	Draft	Trevor Collett	11/03/14				
	Issued to Andrew Millar, Scott Bloxsom						
3	Draft	Trevor Collett	26/03/14				
	Issued to Andrew Millar. Copied to Scott Bloxsom						
4	Draft	Andy Millar Scott Bloxsom	11/12/2014				

TABLE OF CONTENTS

INTRODUCTION

Knowsley Council fully understands how highway infrastructure underpins its economic, social and environmental ambitions, and accepts that it is of critical importance that it should seek to ensure that investment in the highway asset should be both efficient and effective.

In pursuit of this, the Council convened a Scrutiny Working Group which looked both at the management of the highway asset and how the service was procured and operated. One of the recommendations from the Scrutiny Group, which was subsequently endorsed by the Cabinet and Council, was to put in place a more considered approach to highways asset management through the adoption of the guidance and principles recommended by the Highway Maintenance Efficiency Programme (HMEP).

By adopting HMEP approach the Council has given an undertaking to:

- implement lifecycle planning for each of its highway asset categories
- place a greater emphasis on preventative treatments
- be scientific in its identification of sites and its choice of treatment
- place a greater emphasis on achieving and supporting economic growth.

In May 2013 the UK Roads Liaison Group and HMEP published a guidance document on Highway Infrastructure Asset Management. The guidance contained 14 recommendations, which are presented as the *minimum* requirements for highway authorities to achieve a reasonable

level of benefit from properly applied highway asset management planning. Recommendation 3 of the guidance stated:

> ***"An asset management policy and strategy should be developed and published. These should align with the corporate vision and demonstrate the contribution asset management makes towards achieving this vision".***

The guidance document published by HMEP adheres to the principles of PAS 55 - which is the Publicly Available Standard for Asset Management – and has the following definitions of the HAMP policy and strategy:

- Highway Asset Management Policy

> ***"Principles and mandated requirements derived from, and consistent with, the organisational strategic plan, providing a framework for the development and implementation of the asset management strategy and the setting of the asset management objectives."***

- Highway Asset Management Strategy

> ***"Long-term optimised approach to management of the assets, derived from, and consistent with, the organisational strategic plan and the asset management policy"***

In accordance with the Council's commitment to HMEP principles and guidance, this document sets out the Council's inaugural highway asset management policy and strategy.


Public Transport
Goods
Walking
Cycling
Traffic
Public Transport
Goods

Knowsley Council

Highway Asset Management Policy

1. Highway Asset Management Policy

1.1 Knowsley Council places a high significance on its transport infrastructure. The highway network is the Council's most valuable corporate asset, currently valued at around £1 billion. That people should be able to get from A- to- B using a well connected and well maintained highway infrastructure is vital to the economic wellbeing of residents and businesses across the Liverpool City Region.

1.2 The Council as Highway Authority has a statutory duty to maintain, operate and improve the highway network within an increasingly challenging environment that includes:

- limited budgets
- limited staff resources
- mature highway networks
- increased accountability to customers
- increasing public expectations

1.3 The Council is committed to managing its highway network on behalf of those who live, work and invest in the borough, providing high value services in a legally and environmentally compliant and sustainable manner, without compromising the health and safety of employees, contractors or customers.

1.4 The following definition of Highway Asset Management has been adopted:

"Systematic and coordinated activities and practices through which the Council optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organisational strategic plan."

1.5 The focus will be on achieving the following outcomes:

A Safe Network

- complying with statutory obligations
- meeting users needs for safety

A Serviceable Network

- ensuring target level of availability
- achieving and maintaining desired degree of integrity
- maintaining target level of reliability
- achieving and maintaining target condition of all assets

Network Sustainability

- minimising cost over time
- maximising value to the community
- maximising environmental contribution
- efficient use of natural resources

1.6 The outcomes will be achieved by developing strategies, plans and processes that will:

- define desired levels of service for highway assets, in consultation with stakeholders

(Cont.)

- adopt a lifecycle approach to planning asset investment and management decisions

- balance competing needs across the highway network and selecting options that best meet desired outcomes

- monitor, evaluate, and where required, improve service delivery

- manage the risks of asset ownership and operation to ensure continuity of service

- provide for present needs whilst sustaining natural resources for future generations

- adopt a continuous improvement approach to asset management policies and practices

- empower and motivate the entire workforce involved in the operation and maintenance of the highway network.

1.7 It is the Council's objective to remain equal to the best highway asset owners in the country.

1.8 This policy will be kept under review and subject to change in the light of developments in appropriate fields - such as technology, operational tactics or asset care techniques - or in the face of other external or organisational drivers for change.

Knowsley Council

Highway Asset Management Strategy

1. THE BOROUGH AND ITS HIGHWAY INFRASTRUCTURE

1.1 Knowsley is an important location for employment in the Liverpool City Region, which has a combined population of 1.5 million and a £20bn economy. It is a major source of employees for the wider area. The borough has a large industrial base concentrated mainly at Knowsley Industrial Park and business parks at Kirkby, Huyton and Prescot as well as being home to internationally renowned businesses such as Jaguar Landover and QVC.

1.2 As a Highway Authority the Council is directly responsible for maintaining and managing the public highway network. This means that not only does it monitor and repair its own physical infrastructure, but it also coordinates and integrates with other parties that use, rely on or are affected by the public highway network. Examples of other parties are:

- the suppliers of essential utilities - water, gas, electricity, communications - collectively known as statutory undertakers, who have equipment on and under the highway that needs its own monitoring and maintenance
- other transport suppliers – trains, buses and taxis
- the Highways Agency – who are responsible for most of the motorways that cross the borough
- neighbouring councils

- Merseytravel - the operating name for the Merseyside Integrated Transport Authority (ITA) and Merseyside Passenger Transport Executive (PTE) - responsible for leading on transport planning across Merseyside.

1.3 The borough's highway network comprises many diverse assets; this strategy describes how the principles of asset management are applied to all highway assets that are the responsibility of the Council. Through its support and investment, the Council has in the past managed the network and the asset to a good standard. This is reflected in both standard condition surveys and in national customer satisfaction surveys. The network is highly available, widely accessible and providing a good level of service.

1.4 Nevertheless, it is important to embrace the values of continuous improvement and this asset management strategy, and its accompanying plans, procedures and processes, will describe how the highway assets are currently managed and how an asset management approach will be developed to match current best practice.

2. THE HIGHWAY ASSETS

2.1 The following table is the generic list of the highway assets as set out in the *2010 Code of Practice on Transport Infrastructure Assets: Guidance to Support Asset Management, Financial Management and Reporting* from CIPFA (Chartered Institute of Public Finance and Accountancy.

(Note that the word “pavement” is used with its technical meaning of the constructed layers of asphalt, or concrete or stone, that makes up a road. The part of a road intended for vehicles is the carriageway; the part intended for pedestrians is the footway).

Level 1 Asset Type	Level 2 Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
Carriageway	Area (sq m) based elements • Flexible pavements • Flexible composite pavements • Rigid concrete pavements • Rigid composite pavements	• Pavement layers • Other surface types e.g. paved • Central reservation, roundabout, lay-by traffic island etc • Earthworks (embankments & cuttings) • Traffic calming • Fords and causeways
	Linear elements	• Kerbs • Line markings • Road studs • Road drainage elements (gullies, drains etc, but not large structures) • Boundary fences and hedges

Level 1 Asset Type	Level 2 Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
		• Hard strip/shoulder Verges/vegetation
Footways and cycletracks (attached to the road or segregated)	• Footways • Pedestrian areas • Footpath (these are paths that are remote from a carriageway) • Cycletracks	• Pavement layers • Other surface types e.g. block paving, unbound materials
Structures	• Bridges (span > 1.5m) • Cantilever road sign • Chamber/cellar/vault • Culverts (span >0.9m) • High mast lighting (height >20m) • Retaining walls (height >1.35m) • Sign/signal gantries • Structural earthworks, e.g. strengthened/ reinforced soils (all structures with an effective retained height of 1.5m or more) • Subway: pipe • Tunnel (enclosed length of 150m or more) • Underpass/subway: Pedestrian (span of 1.5m or more) • Underpass: vehicular • Special structure	All elements identified on the standard inspection pro forma. Smaller water carrying structures are considered as road drainage.
Highway lighting	• Lighting columns • Lighting unit attached to wall/ wooden pole • Heritage columns	• Column and foundations • Bracket • Luminaries • Control equipment, cables

Level 1 Asset Type	Level 2 Asset Group	Level 3: Components that Level 2 implicitly covers in valuation
	• Illuminated bollards • Illuminated traffic signs	• Control gear, switching, internal wiring cabling (within ownership)
Street furniture	• Transport • Highway • Streetscene/amenity	• Traffic signs (non illuminated) • Safety fences • Pedestrian barriers • Street name plates • Bins • Bollards • Bus shelters • Grit bins • Cattle grids • Gates • Trees/tree protection etc. • Seating • Verge marker posts • Weather stations • Milestones (heritage assets) • Other heritage items
Traffic management systems	• Traffic signals • Pedestrian signals • Zebra crossing	• Different types
	• In-station	• Complete installation
	• Information systems • Safety cameras	• Variable message signs • Vehicle activated signs • Real time passenger information

2.2 The Council does hold a detailed inventory of most of its highway assets; the following table is a summary of some of the primary assets:

Asset type	Quantity
Carriageway	584km*
Footway	717km
Structures	141
Street lighting**	19,762 columns
Drainage	27,700 gullies
Traffic Signals	75 signalised junctions
Variable message signs	16

** includes 8km of motorway*
*** managed through PFI*

3. A VISION FOR KNOWSLEY

3.1 It is a key principle that the way an organisation manages its physical assets should be complementary to the organisation's overall objectives.

3.2 In the *Strategy for Knowsley: the Borough of Choice* - which was published in 2008 and updated in 2014 - the Council and its partners set out a vision to make Knowsley "The Borough of Choice" by 2023 – a place where people would choose to live, work and have their children educated.

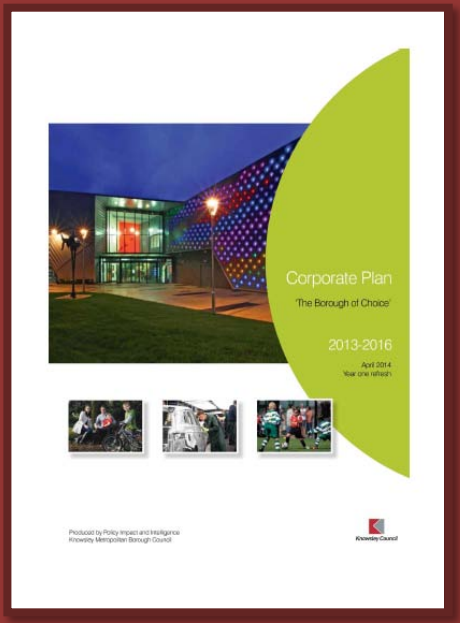
3.3 Achieving this vision by the year 2023 requires the involvement of all partners and agencies within the Knowsley Partnership. All have agreed to contribute to the delivery of ten strategic outcomes. These outcomes are reproduced here, with the right hand column of the table indicating the degree of impact of the way the Council manages its highway assets has on the achievement of each outcome:

	(✓✓✓ = High impact ✓✓ = Significant impact ✓ = Some impact)	
1	Empowered, resilient, cohesive communities.	✓✓✓
2	Safe, attractive, sustainable neighbourhoods.	✓✓✓
3	Quality infrastructure and environment.	✓✓✓
4	Residents are empowered to realise their economic potential.	✓✓
5	Knowsley has the conditions in place to support sustainable business growth.	✓✓
6	Improved outcomes for the Borough's most vulnerable young people.	✓
7	Everybody has the opportunity to have the best health and wellbeing throughout their life.	✓
8	People are protected from risks that can affect their health and wellbeing.	✓✓
9	More people look after themselves and support others to do the same.	✓
10	Children get the best possible start in life and have opportunities to reach their potential	✓

3.5 For example, for children to get the best possible start in life and have opportunities to reach their full potential (outcome number

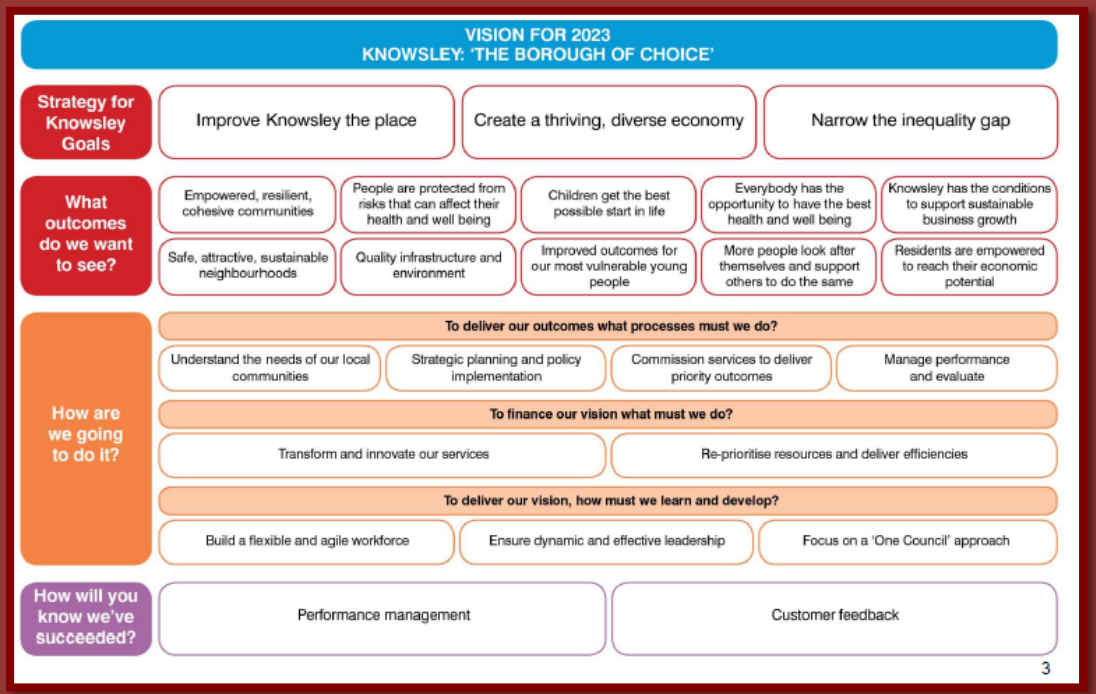
10), a well-maintained, reliable and integrated highway infrastructure is required, offering support to local perinatal and school facilities.

3.6 This vision and the ten outcomes were restated in the council's *Corporate Plan 2013-16 (Refresh April 2014)*



3.7 In this document the Council makes a commitment to provide quality infrastructure and environment, summarised in this extract:

"Quality infrastructure, such as schools, leisure facilities, highways, transport and green spaces are essential features if Knowsley is to attract more people to live and work in the Borough. Actions to improve environmental quality, limit carbon emissions and provide more accessible facilities and services to encourage residents to walk, cycle and use public transport are also important".

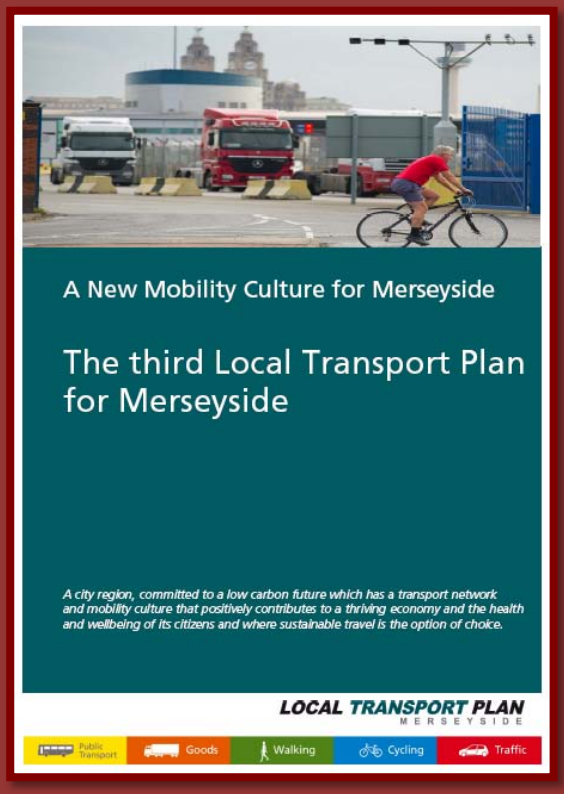


4. STRATEGIC TRANSPORT ISSUES

4.1 The Liverpool City Region Local Enterprise Partnership (LCR LEP) is a private sector led Board with political leaders representing the six local authority areas of Halton, Knowsley, Liverpool, Sefton, St Helens and Wirral. It was formed in March 2012 to drive the economic growth and job creation required by the City Region, with the full endorsement of Government.

4.2 The Merseyside Transport Partnership consists of Knowsley, Liverpool, Sefton, St Helens and Wirral Councils and Merseytravel, the Integrated Transport Authority (ITA) and Passenger Transport Executive (PTE). It is known as "Transport Merseyside".

4.3 The ITA has responsibility for producing a Local Transport Plan (LTP) for the Merseyside region, the current LTP - the *Third Local Transport Plan for Merseyside*, sets out a plan for the period 2011/2012 to 2015/2016, and a longer term strategy through to 2025.



4.4 The LTP, which is a statutory document, is set within the context of the vision for the Liverpool City Region:

"To establish our status as a thriving international city region by 2030"

4.5 Transport Merseyside's vision for the region's transport network is:

"A city region committed to a low carbon future, which has a transport network and mobility culture that positively contributes to a thriving economy and the health and wellbeing of its citizens and where sustainable travel is the option of choice".

4.6 In order to achieve its objectives, LTP3 sets out six "Key Goals":

KG1 Ensure the transport system supports the priorities of the LCR and its Local Strategic Partnerships;
KG2 Provide and promote a clean and low emission transport system which is resilient against changes to climate and oil availability;
KG3 Ensure the transport system promotes and enables improved health and wellbeing and road safety;
KG4 Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, services and leisure and recreational opportunities;
KG5 Ensure the transport network supports economic success of the LCR by supporting local services and infrastructure;
KG6 Maintain our assets to a high standard.

4.7 The importance of good asset management practices is restated throughout the LTP and so is the commitment of each of the partner councils to develop asset management documentation.

5. LTP IMPLEMENTATION PLAN

5.1 Knowsley has produced an LTP 3 Local Implementation Plan, which is a delivery plan contributory to the strategy element of the Third Local Transport Plan for Merseyside.

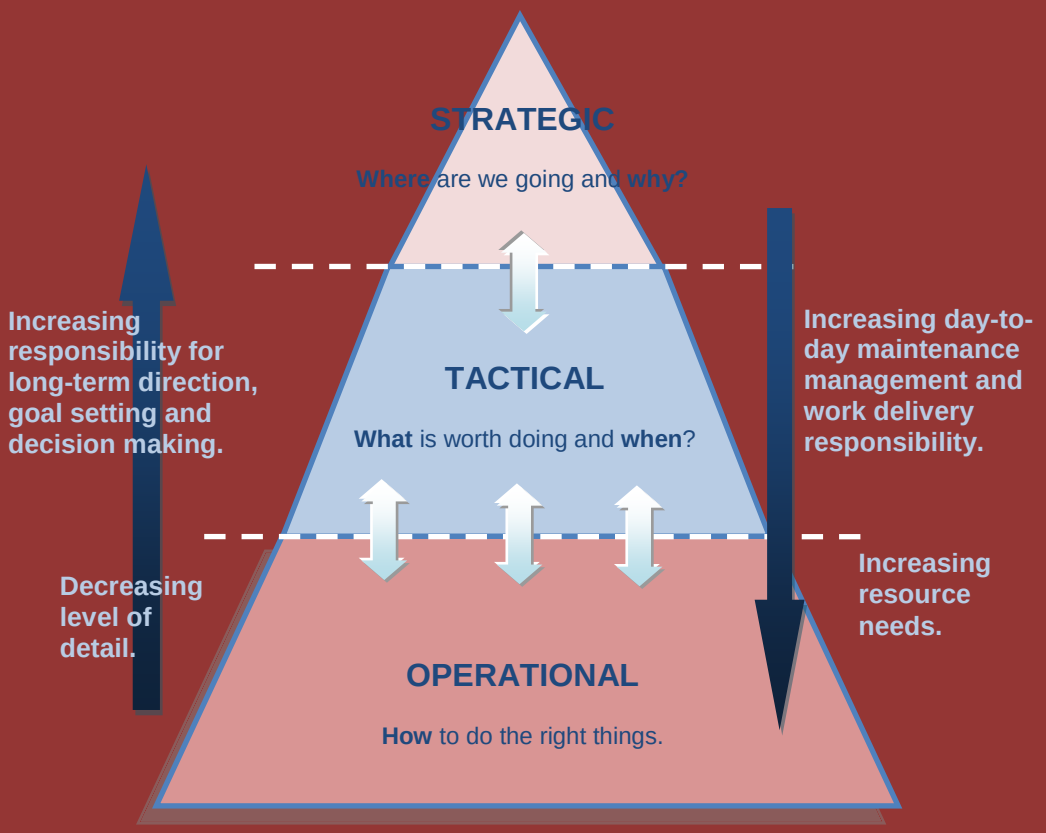
5.2 This document describes three aims:

- to provide the Integrated Transport Authority (ITA) with a clear and thorough indication of how transport funding will be used in Knowsley to deliver the aims and objectives of the strategy element of the Local Transport Plan

- to introduce progressive schemes that will support the social and economic environment of both the borough and the city region, by providing an attractive and durable highway infrastructure within a sustainable, safe and well-managed network

- to provide a forward-plan and scheme approval process that is robust and transparent, and linked to a credible performance framework.

6. ASSET MANAGEMENT AND THE MANAGEMENT HIERARCHY



6.1 An important starting point for asset management is the organisational management levels. The management processes in large organisations (and this is reflected in Knowsley Council) can be broadly categorised into three levels: Strategic, Tactical and Operational. An idealised hierarchy of these management levels is presented below:

6.2 Asset management should align with integrated planning and decision-making at the Strategic, Tactical and Operational levels. The broad scope of asset management functions in the three levels can be summarised:

- **Strategic - Where is the Council going and Why?** At the strategic level the Council promotes its overall long-term

direction for highways and transportation, e.g. policy, goals and objectives, and targets. These are agreed in consultation with City Region partners and take into account any necessary internal/external requirements and/or constraints.

- **Tactical - What is worth doing and When?** At the tactical level the Council's highway asset managers translate the strategic goals and objectives into specific plans and performance targets for individual asset types. The development and documentation of an asset management framework is a tactical activity.

- **Operational - How to do the right things?** At the operational level the Council's asset managers, engineers, technicians and operatives develop and implement detailed work plans and schedules that have a short-term outlook but take account of the work volumes and phasing arising from the asset management strategy. Engineering processes include inspection, routine maintenance, scheme design, work scheduling and implementation. The focus is on choosing the right techniques, the right materials and carrying out the work in the most efficient way.

6.3 The Council believes that the continual development of an asset management approach will enable those staff involved in tactical management to translate its overall strategic goals and objectives into specific plans and performance targets, which will then provide focus and in turn direct operational activities.

6.4 In its 2009 report, *Local Authority Transport Infrastructure Assets Review of Accounting, Management and Finance Mechanisms,* CIPFA (the Chartered Institute of Public Finance and Accountancy) estimated that full implementation of asset management for highways may achieve a 5% saving over the long term. Experience from other sectors has demonstrated that savings of 5 to 15% have been achieved.

7. STRATEGIC ASSET MANAGEMENT OBJECTIVES

In May 2013 the UK Roads Liaison Group and the Highways Maintenance Efficiency Programme jointly published a guidance document, *Highway Infrastructure Asset Management*. The Guidance interprets asset management for highway infrastructure as being based on the consideration of the following themes:

- a strategic approach over the long term
- meeting stakeholders' needs
- a systematic approach
- optimal allocation of resources
- managing expenditure over the asset lifecycle
- meeting performance requirements in the most efficient way
- managing risk
- operational delivery

The guidance makes 14 recommendations, which are presented as the minimum requirements for a highway asset owner to achieve a reasonable level of benefit from asset management. The highway asset management framework that the Council will put in place, this Highway Asset Management Strategy being part of that framework, will adopt and implement these recommendations.

7.1 A Strategic Approach over the Long Term

The Council expects to be the custodian of its highway assets into the future; it understands that the way it manages and maintains those assets today will have effects on the way they will have to be managed and maintained in the future. The Council, led by senior decision makers, but including all those involved in the highways operations, commits to avoid expedient repairs and treatments that would only defer problems.

The Council will make use of best practice whole life cost analyses when making engineering decisions for repair and treatment options.

7.2 Meeting Stakeholders Needs.

The Council understands that it manages and maintains the highway assets for the benefit of the residents and businesses of the borough and for those that travel into and through the borough, and that it is these stakeholders that provide, through their taxes, the required funding. The Council will seek to develop practicable ways to determine the level of service that stakeholders require of the highway assets.

The Council will make sure that the way the highway network is performing is communicated to all stakeholders, using the most appropriate media.

7.3 A Systematic Approach

The Council's approach to managing and maintaining its highway assets will be holistic and end-to-end. That is, the Council will always consider how the repair and maintenance of one particular asset or asset group impacts on other assets. Also, the Council understands that the way it carries out reactive repairs and routine cyclic maintenance to assets has an effect on their ultimate service life. The Council will always look to optimise this relationship.

The Council will regularly review the computer systems and databases used to aid asset management. Where shortcomings are identified or new technology becomes available the Council will adopt a business case approach to ensure that any financial investment will provide a proper return.

7.4 Optimal Allocation of Resources

The Council intends to evolve its reporting processes so that it can see how outcomes, such as the condition of assets or the reliability of journey times across the network, are affected by the way it allocates resources, be they money, materials or human.

The Council recognises that its highway service must be managed and delivered within financial constraints. Highway maintenance is currently funded from several sources. Day to day, reactive and routine maintenance is supported by revenue funding, which comprises funds provided by central government through the formula grant and additional revenue raised locally. Structural

maintenance, which enhances the value of the asset, is in the main funded by capital allocations from central government.

The central government revenue allocations are not 'ring-fenced' for highway purposes. In terms of capital, the allocation from Government is made to Merseytravel as the Integrated Transport Authority. The highway maintenance element of this capital is currently passported directly to the Merseyside districts on an agreed formulaic basis. There are potentially other capital funding mechanisms available, for example the use of local capital receipts, prudential borrowing or private/public partnership initiatives.

Central government also establishes funding pots for various specific highway-related purposes, for example the Single Growth Fund, Local Pinch Point Fund and the Local Sustainable Transport Fund. The Council can compete with other authorities to secure an allocation via a competitive bid.

With the development of an asset management approach the Council will be better able to support longer-term commitment of budgets. It will allow it to estimate the funding required to deliver the required level of service and to provide the tools and processes to ensure efficient and effective use of available resources.

7.5 Managing Expenditure over the Asset Lifecycle

At the time of the first issue of this Highway Asset Management Strategy the Council is in the process of applying a lifecycle

planning analysis to its carriageway asset using the methods in the 2012 HMEP publication, *Lifecycle Planning Toolkit Incorporating Default Carriageway Deterioration Models*.

The Council is using this toolkit to model different budget / performance target scenarios with a view to determining the level of investment required to achieve and maintain the desired condition of its carriageway assets.

The Council will extend this analysis to the footways and other assets, and will continually refine the input data and the output reports.

7.6 Meeting Performance Requirements

In conjunction with the setting of levels of service for individual assets and for the network as a whole, the Council will collect, process and report performance data so that all stakeholders can see whether targets are being met.

The Council will, where practicable, look to benchmark its performance against other highway asset owners.

7.7 Managing Risk

At the time of first publication of this Highway Asset Management Strategy, procedures for the formal assessment and management of risk are being developed. The Council has drafted a manual for highway safety inspections that does describe a risk assessment

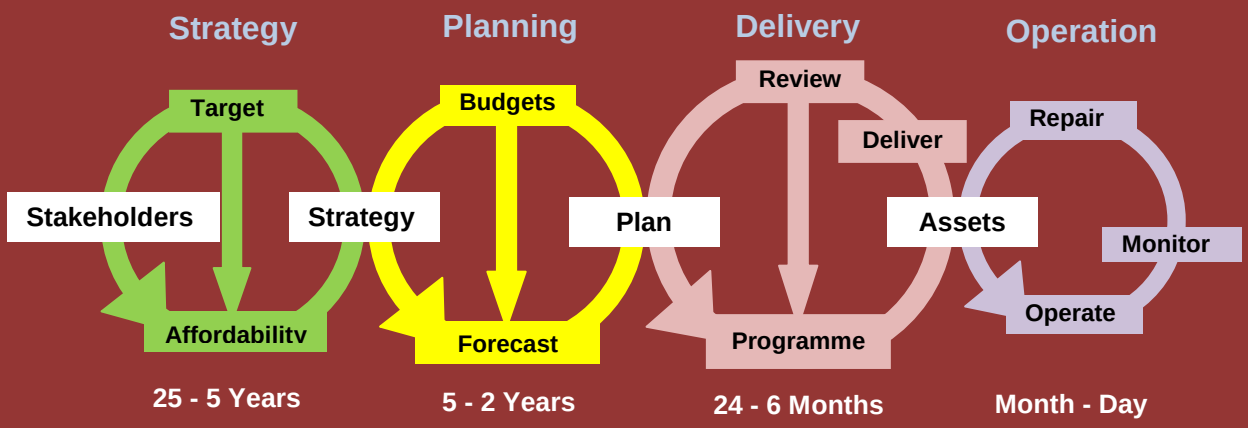
approach to the categorisation of highway defects, and this is in the process of being implemented.

The Council acknowledges the benefits of a systematic approach to managing risks, at strategic, tactical and operational levels and will include risk management in all parts of the developing asset management process.

7.8 Operational Delivery

The Council is committed to delivering all highway management, maintenance and operational services in the most efficient way, for the mutual benefit of all stakeholders, applying techniques and skills in line with current asset management best practice.

The Council will develop and apply processes to the strategic, the planning, the delivery and the operational aspects of managing its highway assets; understanding how these aspects inter-relate. This inter-relationship is summarised by the following graphic:



An essential element of all these aspects is the competency and motivation of all of the people involved, be they directly employed by the Council, or employed by partners and contractors.

8. ASSET MANAGEMENT FRAMEWORK

8.1 This asset management strategy forms part of the Council's asset management framework. The framework will consist of a suite of policies, strategies, plans and written procedures that will cover all aspects of the way the Council manages and maintains its highway assets.

8.2 To describe and demonstrate how this asset management strategy will be implemented a Highway Asset Management Plan (HAMP) will be produced.

8.3 The HAMP will consist of the following sections:

- asset management roles and responsibilities
- levels of service, performance management, monitoring and reporting
- lifecycle planning and investment strategies
- scheme prioritisation and works programmes
- risk management
- procurement strategy
- training and competency

8.4 The following documents have been recently completed, and are referenced as annexes to the HAMP:

- Safety Defect Inspection Policy
- Skidding Resistance Policy
- Footway Crossing Policy

The following documents are planned:

- Asset Information and Data Management Strategy
- Materials and Design Guide
- Carbon Reduction Plan